



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,778	04/20/2001	Anton Blaakmeer	702-010062	7921

7590 11/10/2003

Russell D Orkin
700 Koppers Building
436 Seventh Avenue
Pittsburgh, PA 15219-1818

EXAMINER

NGUYEN, SON T

ART UNIT	PAPER NUMBER
----------	--------------

3643

DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,778

Applicant(s)

BLAAKMEER ET AL.

Examiner

Son T. Nguyen

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-11 have been canceled by applicants. Pending claims are 12-27.

Claim Objections

2. **Claim 27** is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 27 is dependent on claim 18, of which claim 27 claims the same subject, i.e. sphagnum and peat, as that of claim 18.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 12-17,19,21,22,24-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Baron et al. (US 5081791).

For claim 12, Baron et al. disclose a plant substrate comprising mineral wool (col. 3, line 9) and an ion-exchange agent (col. 3, lines 4-10). In addition, Baron et al. further teach that the mineral wool and ion-exchange agent are coherent matrix (col. 3, lines 20-27 and col. 4, lines 18-30). However, Baron et al. are silent about the agent being up to 20 % volume with a capacity of at least about 15 meq/100g dry weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made

Art Unit: 3643

to have the agent of Baron et al. being up to 20 % volume with a capacity of at least about 15 meq/100g dry weight, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect (for example, to make it more potent, the type of plant being grown on this substrate, the growing conditions, etc.) is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claims 13 & 14, Baron et al. disclose soil minerals (col. 3, lines 5-9) which is a cation exchange agent as discussed by applicants, page 3, line 10.

For claim 15, since these soil minerals as described by Baron in col. 3, lines 5-9 (omitting the clay), are similar to that claimed by applicants, the soil minerals of Baron et al. should display same characteristic as that of applicants, i.e. having a non-clay like behavior with respect to swelling and shrinkage.

For claim 16, Baron et al. are silent about pore sizes. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the ion exchange agent of Baron et al. with pore size that is smaller than that of the mineral wool having a density of less than about 72 kg/m^3 , since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claim 17, Baron et al. disclose zeolite (col. 3, line 7).

For claim 19, Baron et al. disclose clay (col. 3, line 7). However, they are silent about the clay substituting up to 20% volume. It would have been obvious to one having

Art Unit: 3643

ordinary skill in the art at the time the invention was made to have the clay of Baron et al. substituting the mineral wool up to 20% volume, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claim 21, Baron et al. disclose a growing mat with the substrate as described. See figures.

For claim 22, see the above.

For claim 24, since Baron et al. disclose zeolite (col. 3, line 7), it should display a stable cage-like structure because it is the same zeolite claimed by applicants.

For claim 25, Baron et al. are silent about an ion exchange capacity of about 30 meq/100g dry weight or 40 meq/100g dry weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the ion exchange agent of Baron et al. with a capacity of about 30 meq/100g dry weight or 40 meq/100g dry weight, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect (more potent) is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

5. **Claim 20** is rejected under 35 U.S.C. 103(a) as being unpatentable over Baron et al. (US 5081791) in view of Clausen (WO 91/08662 on form PTO-1449). Clausen teaches a substrate containing similar ingredients as that of Baron et al. and the substrate is used as a growing block (page 5, line 10). It would have been obvious to

one having ordinary skill in the art at the time the invention was made to employ the substrate of Baron et al. as a growing block as taught by Clausen so that the substrate are in bound form which makes it easier to handle.

6. **Claims 18,23 & 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Baron et al. (US 5081791) in view of Schnuda (US 5368626). Baron et al. are silent about peat. Schnuda teaches a growth medium or substrate in which he employs peat together with mineral wool in the medium to provide a higher water retention medium (col. 1, lines 62-68). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ peat as taught by Schnuda in the substrate of Baron et al. in order to increase water retention in the substrate.

Response to Arguments

7. Applicant's arguments filed 8/27/03 have been fully considered but they are not persuasive.

Applicants argued that Baron et al. materials are granulate which means that they are not in the form of a cohesive matrix of mineral wool and ion-exchange agent. From col. 3, lines 20-27 and col. 4, lines 15-30 of Baron et al., it is clear that the mineral wool and ion-exchange agent in Baron et al. are cohesive or coherent by the use of an adhesive. Therefore, the final result substrate of Baron et al. is a coherent or cohesive matrix.

Applicants argued that it is important to note, for example, that Baron et al. mention zeolite in the same group as clay and bentonite, thus overlooking the fact that zeolite belongs to a different group than clay and bentonite when it is

Art Unit: 3643

used as an ion-exchange agent. Baron et al. did not overlook regarding zeolite being grouped with clay and bentonite. Baron et al. merely state in col. 3, lines 6-9, examples of types of mineral particles that can be used in the substrate, and from this column, there is no indication that Baron et al. are saying that zeolite belongs with clay and bentonite as alleged by applicants.

Applicants argued that there are over 130 different known framework structures of zeolite, and a general teaching of zeolite from Baron et al. alone does not necessarily teach the claimed minimum ion-exchange capacity. It's true that there are numerous zeolite framework, that is why it would be obvious to one of ordinary skill in the art to select the desired zeolite framework based on routine testing and experimentation for the applicable types of plants being grown or the growing conditions, etc. one wishes to grow.

For the Clausen and Schnuda references, applicants argued against Baron et al., therefore, see the above for Baron et al. response.

Conclusion

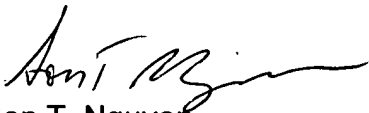
8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 3643

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Nguyen whose telephone number is (703) 305-0765. The examiner can normally be reached on Monday - Friday from 9:00 a.m. to 5:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon, can be reached at (703) 308-2574. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (703) 872-9325. The official fax number is 703-872-9306.



Son T. Nguyen
Primary Examiner, GAU 3643
November 05, 2003